| | Type | L # | Hits | Search Text | DBs | Time Stamp | Comments | Error Definition | Errors |
|---|---|---|---|---|---|---|---|---|---|
| 1 | BRS | L1 | 1772 | metabolic adj disease | USPAT; US-PGPUB; EPO; JPO; DERWENT | 2003/01/16 09:32 | | | 0 |
| 2 | BRS | L2 | 43165 | diabetes | USPAT; US-PGPUB; EPO; JPO; DERWENT | 2003/01/16 09:33 | | | 0 |
| 3 | BRS | L3 | 3019 | type adj ii adj diabetes | USPAT; US-PGPUB; EPO; JPO; DERWENT | 2003/01/16 09:33 | | | 0 |
| 4 | BRS | L4 | 162 | lxr | USPAT; US-PGPUB; EPO; JPO; DERWENT | 2003/01/16 09:34 | | | 0 |
| 5 | BRS | L5 | 0 | lxrbeta | USPAT; US-PGPUB; EPO; JPO; DERWENT | 2003/01/16 09:34 | | | 0 |
| 6 | BRS | L6 | 17 | lxr$1beta | USPAT; US-PGPUB; EPO; JPO; DERWENT | 2003/01/16 09:34 | | | 0 |
| 7 | BRS | L7 | 36 | lxr$1alpha | USPAT; US-PGPUB; EPO; JPO; DERWENT | 2003/01/16 09:34 | | | 0 |
| 8 | BRS | L8 | 35 | (4 or 6 or 7) same agonist | USPAT; US-PGPUB; EPO; JPO; DERWENT | 2003/01/16 09:47 | | | 0 |

| | Type | L # | Hits | Search Text | DBs | Time Stamp | Comments | Error Definition | Errors |
|---|---|---|---|---|---|---|---|---|---|
| 9 | BRS | L9 | 11 | (4 or 6 or 7) same antagonist | USPAT; US-PGPUB; EPO; JPO; DERWENT | 2003/01/16 09:47 | | | 0 |
| 10 | BRS | L10 | 4 | (8 or 9) same (1 or 2) | USPAT; US-PGPUB; EPO; JPO; DERWENT | 2003/01/16 09:48 | | | 0 |
| 11 | BRS | L13 | 0 | tangirala adj rajendra.in. | USPAT; US-PGPUB; EPO; JPO; DERWENT | 2003/01/16 09:43 | | | 0 |
| 12 | BRS | L11 | 2 | schulman adj ira.in. | USPAT; US-PGPUB; EPO; JPO; DERWENT | 2003/01/16 09:43 | | | 0 |
| 13 | BRS | L12 | 4 | bischoff adj eric.in. | USPAT; US-PGPUB; EPO; JPO; DERWENT | 2003/01/16 09:43 | | | 0 |
| 14 | BRS | L14 | 0 | (11 or 12) and 10 | USPAT; US-PGPUB; EPO; JPO; DERWENT | 2003/01/16 09:44 | | | 0 |
| 15 | BRS | L15 | 3 | 6 same antagonist | USPAT; US-PGPUB; EPO; JPO; DERWENT | 2003/01/16 09:47 | | | 0 |
| 16 | BRS | L16 | 4 | 6 same agonist | USPAT; US-PGPUB; EPO; JPO; DERWENT | 2003/01/16 09:47 | | | 0 |

| | Type | L # | Hits | Search Text | DBs | Time Stamp | Comments | Error Definition | Errors |
|---|---|---|---|---|---|---|---|---|---|
| 17 | BRS | L17 | 0 | (15 or 16) same (1 or 2) | USPAT; US-PGPUB; EPO; JPO; DERWENT | 2003/01/16 09:48 | | | 0 |

| | Type | L # | Hits | Search Text | DBs | Time Stamp | Comments | Error Definition | Errors |
|---|---|---|---|---|---|---|---|---|---|
| 1 | BRS | L1 | 4 | (((lxr or lxr$1beta or lxr$1alpha) same agonist) or ((lxr or lxr$1beta or lxr$1alpha) same antagonist)) same ((metabolic adj disease) or diabetes) | USPAT; US-PGPUB; EPO; JPO; DERWENT | 2003/01/16 10:00 | | | 0 |
| 2 | BRS | L2 | 1554 | thiazolidinedione | USPAT; US-PGPUB; EPO; JPO; DERWENT | 2003/01/16 10:01 | | | 0 |
| 3 | BRS | L3 | 0 | 1 same 2 | USPAT; US-PGPUB; EPO; JPO; DERWENT | 2003/01/16 10:01 | | | 0 |

=> d his

(FILE 'HOME' ENTERED AT 10:03:02 ON 16 JAN 2003)

FILE 'MEDLINE, CAPLUS, BIOSIS, EMBASE, SCISEARCH, AGRICOLA' ENTERED AT
10:03:25 ON 16 JAN 2003
L1 134117 S METABOLIC DISEASE
L2 670541 S DIABETES
L3 991 S LXR OR (LXR (W) ALPHA) OR (LXR (W) BETA)
L4 204 S L3 (P) (AGONIST OR ANTAGONIST)
L5 26 S (L1 OR L2) (P) (L3 OR L4)
L6 11 DUPLICATE REMOVE L5 (15 DUPLICATES REMOVED)
L7 7071 S THIAZOLIDINEDIONE
L8 1 S L6 (P) L7

=> log y

FILE 'HOME' ENTERED AT 10:03:02 ON 16 JAN 2003

=> file medline caplus biosis embase scisearch agricola
COST IN U.S. DOLLARS SINCE FILE ENTRY 0.21 TOTAL SESSION 0.21

FULL ESTIMATED COST

FILE 'MEDLINE' ENTERED AT 10:03:25 ON 16 JAN 2003

FILE 'CAPLUS' ENTERED AT 10:03:25 ON 16 JAN 2003
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.


FILE 'BIOSIS' ENTERED AT 10:03:25 ON 16 JAN 2003


FILE 'EMBASE' ENTERED AT 10:03:25 ON 16 JAN 2003


FILE 'SCISEARCH' ENTERED AT 10:03:25 ON 16 JAN 2003


FILE 'AGRICOLA' ENTERED AT 10:03:25 ON 16 JAN 2003

=> s metabolic disease
3 FILES SEARCHED...
L1 134117 METABOLIC DISEASE

=> s diabetes
L2 670541 DIABETES

=> s lxr or (lxr (w) alpha) or (lxr (w) beta)
L3 991 LXR OR (LXR (W) ALPHA) OR (LXR (W) BETA)

=> s l3 (p) (agonist or antagonist)
L4 204 L3 (P) (AGONIST OR ANTAGONIST)

=> s (l1 or l2) (p) (l3 or l4)
L5 26 (L1 OR L2) (P) (L3 OR L4)

=> duplicate remove l5
DUPLICATE PREFERENCE IS 'MEDLINE, CAPLUS, BIOSIS, EMBASE, SCISEARCH'
KEEP DUPLICATES FROM MORE THAN ONE FILE? Y/(N):n
PROCESSING COMPLETED FOR L5
L6 11 DUPLICATE REMOVE L5 (15 DUPLICATES REMOVED)

=> d l6 1-11 ibib abs

L6 ANSWER 1 OF 11 MEDLINE DUPLICATE 1
ACCESSION NUMBER: 2003007893 IN-PROCESS
DOCUMENT NUMBER: 22401814 PubMed ID: 12414791
TITLE: Antidiabetic action of a liver x receptor agonist mediated by inhibition of hepatic gluconeogenesis.
AUTHOR: Cao Guoqing; Liang Yu; Broderick Carol L; Oldham Brian A; Beyer Thomas P; Schmidt Robert J; Zhang Youyan; Stayrook Keith R; Suen Chen; Otto Keith A; Miller Anne R; Dai Jiannong; Foxworthy Patricia; Gao Hong; Ryan Timothy P; Jiang Xian-Cheng; Burris Thomas P; Eacho Patrick I; Etgen Garret J
CORPORATE SOURCE: Lilly Research Laboratories, Eli Lilly & Company, Indianapolis, Indiana 46285 and the Department of Anatomy and Cell Biology, State University of New York Downstate Medical Center, Brooklyn, New York 11203.
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (2003 Jan 10) 278 (2) 1131-6.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English
FILE SEGMENT: IN-PROCESS; NONI[redacted]XED; Priority Journals
ENTRY DATE: Entered STN: 20030107
Last Updated on STN: 20030107

AB The oxysterol receptors ***LXR*** (liver X receptor)-alpha and LXRbeta are nuclear receptors that play a key role in regulation of cholesterol and fatty acid metabolism. We found that ***LXRs*** also play a significant role in glucose metabolism. Treatment of diabetic rodents with the ***LXR*** ***agonist*** , T0901317, resulted in dramatic reduction of plasma glucose. In insulin-resistant Zucker (fa/fa) rats, T0901317 significantly improved insulin sensitivity. Activation of ***LXR*** did not induce robust adipogenesis but rather inhibited the expression of several genes involved in hepatic gluconeogenesis, including phosphoenolpyruvate carboxykinase (PEPCK). Hepatic glucose output was dramatically reduced as a result of this regulation. Nuclear run-on studies indicated that transcriptional repression was primarily responsible for the inhibition of PEPCK by the ***LXR*** ***agonist*** . In addition, we show that the regulation of the liver gluconeogenic pathway by ***LXR*** ***agonists*** was a direct effect on hepatocytes. These data not only suggest that ***LXRs*** are novel targets for ***diabetes*** but also reveal an unanticipated role for these receptors, further linking lipid and glucose metabolism.

L6 ANSWER 2 OF 11 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:539794 CAPLUS
DOCUMENT NUMBER: 137:106027
TITLE: Protein-protein interactions of receptor LXR-.alpha. and diagnosis and treatment of disorders associated with cholesterol homeostasis and atherogenesis
INVENTOR(S): Cimbora, Daniel M.; Heichman, Karen; Bartel, Paul L.
PATENT ASSIGNEE(S): Myriad Genetics, Inc., USA
SOURCE: PCT Int. Appl., 75 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 2002055657 | A2 | 20020718 | WO 2001-US48561 | 20011220 |

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2000-256983P P 20001221

AB The present invention relates to the discovery of novel protein-protein interactions that are involved in mammalian physiol. pathways, including physiol. disorders or diseases. Examples of physiol. disorders and diseases include non-insulin dependent ***diabetes*** mellitus (NIDDM), neurodegenerative disorders, such as Alzheimer's Disease (AD), and the like. Thus, the present invention is directed to complexes of these proteins and/or their fragments, antibodies to the complexes, diagnosis of physiol. generative disorders (including diagnosis of a predisposition to and diagnosis of the existence of the disorder), drug screening for agents which modulate the interaction of proteins described herein, and identification of addnl. proteins in the pathway common to the proteins described herein. Using ***LXR*** -. ***alpha*** . in yeast two hybrid screens, novel protein interactions with utrophin, zyxin, LIMS1, PN7771, Homer-3, RACK1, EIF3S1, PSMD11, KIAA0610, and CIR were identified.

L6 ANSWER 3 OF 11 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 2
ACCESSION NUMBER: 2002:775205 CAPLUS
TITLE: Polyunsaturated fatty acids and acetoacetate downregulate the expression of the ATP-binding cassette transporter A1

AUTHOR(S): Uehara, Yoshinari; Engel, Thomas; Li, Zhengchun; Goepfert, Christian; Rust, Stephan; Zhou, Xiaoqin; Langer, Claus; Schachtrup, Christian; Wiekowski, Johannes; Lorkowski, Stefan; Assmann, Gerd; Von Eckardstein, Arnold

CORPORATE SOURCE: Institute of Clinical Chemistry and Laboratory Medicine, Central Laboratory, Westphalian Wilhelms-University, Munster, Germany

SOURCE: Diabetes (2002), 51(10), 2922-2928
CODEN: DIAEAZ; ISSN: 0012-1797

PUBLISHER: American Diabetes Association

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Low HDL cholesterol is a frequent cardiovascular risk factor in ***diabetes*** . Because of its pivotal role for the regulation of HDL plasma levels, we investigated in vivo and in vitro regulation of the ATP-binding cassette transporter A1 (ABCA1) by insulin and metabolites accumulating in ***diabetes*** . Compared with euglycemic control mice, ABCA1 gene expression was severely decreased in the liver and peritoneal macrophages of diabetic mice. Treatment with insulin restored this deficit. Incubation of cultivated HepG2 hepatocytes and RAW264.7 macrophages with unsatd. fatty acids or acetoacetate, but not with insulin, glucose, satd. fatty acids, or hydroxybutyrate, downregulated ABCA1 mRNA and protein. The suppressive effect of unsatd. fatty acids and acetoacetate became most obvious in cells stimulated with oxysterols or retinoic acid but was independent of the expression of the thereby regulated transcription factors liver-X-receptor .alpha. ( ***LXR*** . ***alpha*** .) and retinoid-X-receptor .alpha. (RXR.alpha.), resp. Unsatd. fatty acids and acetoacetate also reduced ABCA1 promotor activity in RAW264.7 macrophages that were transfected with a 968-bp ABCA1 promotor/luciferase gene construct. As the functional consequence, unsatd. fatty acids and acetoacetate inhibited cholesterol efflux from macrophages. Downregulation of ABCA1 by unsatd. fatty acids and acetoacetate may contribute to low HDL cholesterol and increased cardiovascular risk of diabetic patients.

REFERENCE COUNT: 45 THERE ARE 45 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 4 OF 11 MEDLINE DUPLICATE 3

ACCESSION NUMBER: 2002396032 MEDLINE

DOCUMENT NUMBER: 22139932 PubMed ID: 12145154

TITLE: Liver X receptors downregulate 11beta-hydroxysteroid dehydrogenase type 1 expression and activity.

AUTHOR: Stulnig Thomas M; Oppermann Udo; Steffensen Knut R; Schuster Gertrud U; Gustafsson Jan-Ake

CORPORATE SOURCE: Department of Medical Nutrition and Biosciences, Karolinska Institutet, Huddinge, Sweden.. thomas.stulnig@akh-wien.ac.at

SOURCE: DIABETES, (2002 Aug) 51 (8) 2426-33.
Journal code: 0372763. ISSN: 0012-1797.

PUB. COUNTRY: United States

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals

ENTRY MONTH: 200208

ENTRY DATE: Entered STN: 20020730
Last Updated on STN: 20030108
Entered Medline: 20020821

AB 11Beta-hydroxysteroid dehydrogenase type 1 (11beta-HSD-1) converts inactive corticosteroids into biologically active corticosteroids, thereby regulating the local concentration of active glucocorticoids, such as cortisol. 11beta-HSD-1 is particularly expressed in adipocytes and liver and appears to be causally linked to the development of type 2 ***diabetes*** and the metabolic syndrome. Liver X receptor ( ***LXR*** )- ***alpha*** and -beta are nuclear oxysterol receptors whose key role in lipid metabolic regulation has recently been established. In this study, we show that treatment of adipocytes derived from 3T3-L1 cells and mouse embryonic fibroblasts in vitro with synthetic or natural ***LXR*** ***agonists*** decreases mRNA expression of 11beta-HSD-1 by approximately 50%, paralleled by a significant decline in 11beta-HSD-1 enzyme activity. Downregulation of 11beta-HSD-1 mRNA by ***LXRs*** started after a lag period of 8 h and required ongoing protein synthesis.

Moreover, long-term per os treatment with a synthetic ***LXR*** ***agonist*** downregulated beta-HSD-1 mRNA levels by approximately 50% in brown adipose tissue and liver of wild-type but not of LXRalpha(-/-)beta(-/-) mice and was paralleled by downregulation of hepatic PEPCK expression. In conclusion, ***LXR*** ligands could mediate beneficial metabolic effects in insulin resistance syndromes including type 2 ***diabetes*** by interfering with peripheral glucocorticoid activation.

L6 ANSWER 5 OF 11 MEDLINE DUPLICATE 4
ACCESSION NUMBER: 2002675571 MEDLINE
DOCUMENT NUMBER: 22323543 PubMed ID: 12435796
TITLE: Novel roles of liver X receptors exposed by gene expression profiling in liver and adipose tissue.
AUTHOR: Stulnig Thomas M; Steffensen Knut R; Gao Hui; Reimers Mark; Dahlman-Wright Karin; Schuster Gertrud U; Gustafsson Jan-Ake
CORPORATE SOURCE: Department of Medical Nutrition and Biosciences, Karolinska Institutet, Huddinge, Sweden.. thomas.stulnig@akh-wien.ac.at
SOURCE: MOLECULAR PHARMACOLOGY, (2002 Dec) 62 (6) 1299-305. Journal code: 0035623. ISSN: 0026-895X.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200212
ENTRY DATE: Entered STN: 20021119
Last Updated on STN: 20021227
Entered Medline: 20021209

AB Liver X receptor ( ***LXR*** ) ***alpha*** and LXRbeta are nuclear oxysterol receptors whose biological function has so far been elucidated only with respect to cholesterol and lipid metabolism. To expose novel biological roles for ***LXRs*** , we performed genome-wide gene expression profiling studies in liver and white and brown adipose tissue from wild-type (LXRalpha(+/+)beta(+/+)) and knockout mice (LXRalpha(-/-)beta(-/-)) treated with a synthetic ***LXR*** ***agonist*** . By an adapted statistical analysis, we detected 319 genes significantly regulated by ***LXR*** ***agonist*** treatment in wild-type but not in knockout mice, fulfilling most stringent criteria with an overall confidence of 94%. Down-regulation of essential enzymes of gluconeogenesis in liver could point to possible beneficial effects of ***LXR*** ***agonists*** in ***diabetes*** mellitus. ***LXR*** ***agonist*** treatment also altered expression of genes involved in steroid hormone synthesis and growth hormone receptor signaling, emphasizing a potential impact on endocrine function. Notably, ***LXR*** ***agonist*** treatment up-regulated CYP4A10 and CYP4A14 together with cytochrome P450 reductase, indicating a possible enhancement of microsomal lipid peroxidation. In conclusion, these gene expression profiling data identify novel areas of regulation by ***LXRs*** and provide a highly valuable basis for further research on the biological functions of these nuclear receptors and the pharmacological characteristics of their ligands.

L6 ANSWER 6 OF 11 SCISEARCH COPYRIGHT 2003 ISI (R)
ACCESSION NUMBER: 2002:421908 SCISEARCH
THE GENUINE ARTICLE: 550DH
TITLE: SREBPs: activators of the complete program of cholesterol and fatty acid synthesis in the liver
AUTHOR: Horton J D (Reprint); Goldstein J L; Brown M S
CORPORATE SOURCE: Univ Texas, SW Med Ctr, Dept Mol Genet, 5323 Harry Hines Blvd, Room L5238, Dallas, TX 75235 USA (Reprint); Univ Texas, SW Med Ctr, Dept Mol Genet, Dallas, TX 75235 USA; Univ Texas, SW Med Ctr, Dept Internal Med, Dallas, TX 75235 USA
COUNTRY OF AUTHOR: USA
SOURCE: JOURNAL OF CLINICAL INVESTIGATION, (MAY 2002) Vol. 109, No. 9, pp. 1125-1131. Publisher: AMER SOC CLINICAL INVESTIGATION INC, 35 RESEARCH DR, STE 300, ANN ARBOR, MI 48103 USA. ISSN: 0021-9738.
DOCUMENT TYPE: General Review; Journal

LANGUAGE: English
REFERENCE COUNT: 47

L6 ANSWER 7 OF 11 MEDLINE
ACCESSION NUMBER: 2002199307 IN-PROCESS
DOCUMENT NUMBER: 21929611 PubMed ID: 11931719
TITLE: Orphan nuclear receptors find a home in the arterial wall.
AUTHOR: Laffitte Bryan A; Tontonoz Peter
CORPORATE SOURCE: Howard Hughes Medical Institute, UCLA School of Medicine, Box 951662, Los Angeles, CA 90095-1662, USA.. ptontonoz@mednet.ucla.edu
SOURCE: Curr Atheroscler Rep, (2002 May) 4 (3) 213-21. Journal code: 100897685. ISSN: 1523-3804.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: IN-PROCESS; NONINDEXED; Priority Journals
ENTRY DATE: Entered STN: 20020405
Last Updated on STN: 20021211

AB Orphan nuclear receptors of the peroxisome proliferator activated receptor (PPAR) and liver X receptor ( ***LXR*** ) subfamilies have been shown to play critical roles in both local and systemic lipid metabolism. The PPARs control fatty acid metabolism in various cell types, including adipocytes, liver, and macrophages. The ***LXRs*** have been implicated in the regulation of cholesterol metabolism in the liver, intestines, and macrophages. The importance of these receptors in physiologic lipid metabolism suggests that they may influence the development of metabolic disorders such as obesity, ***diabetes*** , and atherosclerosis. Furthermore, the ability of these receptors to be modulated pharmacologically makes them attractive therapeutic targets. This review focuses on the role of PPAR and ***LXR*** signaling pathways in macrophage lipid metabolism and the potential of these pathways to modulate the development of atherosclerosis.

L6 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:816445 CAPLUS
DOCUMENT NUMBER: 135:352751
TITLE: Treatment of hypertriglyceridemia and other conditions using nuclear receptor LXR modulators
INVENTOR(S): Shan, Bei; Schultz, Joshua; Tu, Hua
PATENT ASSIGNEE(S): Tularik Inc., USA
SOURCE: PCT Int. Appl., 60 pp. CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 2001082917 | A2 | 20011108 | WO 2001-US14586 | 20010503 |
| WO 2001082917 | A3 | 20020606 | | |

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

| | | | | |
|---|---|---|---|---|
| US 2002048572 | A1 | 20020425 | US 2001-848990 | 20010503 |

PRIORITY APPLN. INFO.: US 2000-201601P P 20000503

AB This invention provides methods for identifying compds. that are suitable for use in modulating fatty acid and triglyceride biosynthesis, and thus treating conditions such as hypertriglyceridemia and lipodystrophy, among others. Provided are in vitro assays by which one can conduct prescreening to identify candidate therapeutic agents that are suitable for further testing, as well as assays for identifying agents that are useful for administration for treating conditions assocd. with abnormalities in fatty acid and triglyceride biosynthesis.

L6 ANSWER 9 OF 11 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:95945 CAPLUS
DOCUMENT NUMBER: 134:202751
TITLE: X-ceptors, nuclear receptors for metabolism
AUTHOR(S): Auwerx, Johan; Mangelsdorf, David
CORPORATE SOURCE: Institut de Genetique et de Biologie Moleculaire et Cellulaire. CNRS/INSERM/ULP, Illkirch, F-67404, Fr.
SOURCE: International Congress Series (2000), 1215(Atherosclerosis XII), 21-39
CODEN: EXMDA4; ISSN: 0531-5131
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review with 118 refs. is given. The authors designate permissive RXR heterodimer partners as X-ceptors. These X-ceptors include nuclear receptors such as the peroxisome proliferator-activated receptors (PPAR), the liver X receptors ( ***LXR*** ), the pregnane X receptor or steroid and xenobiotic receptor (PXR/SXR), and the farnesol X receptor (FXR; also termed bile acid receptor or BAR). The ligands for these X-ceptors are found in excess (Xs) in humans in an industrialized westernized society and include compds. of dietary origin, such as fatty acids (PPARs) and sterols ( ***LXRs*** ), compds. induced by a western-style diet, such as bile acids (FXR), and drugs and xenobiotics (SXR, PXR). X-ceptors can therefore be considered as receptors for excess, or thrifty receptors, and they are thought to play an important role in many common disorders, such as obesity, insulin resistance, type 2 ***diabetes*** , hyperlipidemia, gallbladder disease, etc., often commonly referred to as "syndrome X". The central role of X-ceptors in common disorders makes them also excellent drug targets. The above points are illustrated by reviewing the biol. of PPAR.gamma. a master controller of adipogenesis, lipid and glucose homeostasis, and of ***LXR*** and FXR, which together control cholesterol and bile acid homeostasis.
REFERENCE COUNT: 118 THERE ARE 118 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 10 OF 11 SCISEARCH COPYRIGHT 2003 ISI (R)
ACCESSION NUMBER: 1998:182005 SCISEARCH
THE GENUINE ARTICLE: YZ065
TITLE: New patents and allowances
AUTHOR: ANON
SOURCE: BIOTECHNOLOGY LAW REPORT, (JAN-FEB 1998) Vol. 17, No. 1, pp. 20-26.
Publisher: MARY ANN LIEBERT INC PUBL, 2 MADISON AVENUE, LARCHMONT, NY 10538.
ISSN: 0278-9728.
DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 0

L6 ANSWER 11 OF 11 MEDLINE DUPLICATE 5
ACCESSION NUMBER: 97238686 MEDLINE
DOCUMENT NUMBER: 97238686 PubMed ID: 9121558
TITLE: Sensitization of diabetic and obese mice to insulin by retinoid X receptor agonists.
AUTHOR: Mukherjee R; Davies P J; Crombie D L; Bischoff E D; Cesario R M; Jow L; Hamann L G; Boehm M F; Mondon C E; Nadzan A M; Paterniti J R Jr; Heyman R A
CORPORATE SOURCE: Department of Cardiovascular Research, Ligand Pharmaceuticals, San Diego, California 92121, USA.
SOURCE: NATURE, (1997 Mar 27) 386 (6623) 407-10.
Journal code: 0410462. ISSN: 0028-0836.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199704
ENTRY DATE: Entered STN: 19970506
Last Updated on STN: 19970506
Entered Medline: 19970418
AB Retinoic acid receptors (RAR), thyroid hormone receptors (TR), peroxisome proliferator activated receptors (PPARs) and the orphan receptor,

***LXR*** , bind preferentially to DNA as heterodimers with a common partner, retinoid X receptor (RXR), to regulate transcription. We investigated whether RXR-selective ***agonists*** replicate the activity of ligands for several of these receptors? We demonstrate here that RXR-selective ligands (referred to as rexinoids) function as RXR heterodimer-selective ***agonists*** , activating RXR: PPARgamma and RXR: ***LXR*** dimers but not RXR:RAR or RXR:TR heterodimers. Because PPARgamma is a target for antidiabetic agents, we investigated whether RXR ligands could alter insulin and glucose signalling. In mouse models of noninsulin-dependent ***diabetes*** mellitus (NIDDM) and obesity, RXR ***agonists*** function as insulin sensitizers and can decrease hyperglycaemia, hypertriglyceridaemia and hyperinsulinaemia. This antidiabetic activity can be further enhanced by combination treatment with PPARgamma ***agonists*** , such as thiazolidinediones. These data suggest that the RXR:PPARgamma heterodimer is a single-function complex serving as a molecular target for treatment of insulin resistance. Activation of the RXR:PPARgamma dimer with rexinoids may provide a new and effective treatment for NIDDM.

=> d his

(FILE 'HOME' ENTERED AT 10:03:02 ON 16 JAN 2003)

FILE 'MEDLINE, CAPLUS, BIOSIS, EMBASE, SCISEARCH, AGRICOLA' ENTERED AT 10:03:25 ON 16 JAN 2003

```
L1        134117 S METABOLIC DISEASE
L2        670541 S DIABETES
L3           991 S LXR OR (LXR (W) ALPHA) OR (LXR (W) BETA)
L4           204 S L3 (P) (AGONIST OR ANTAGONIST)
L5            26 S (L1 OR L2) (P) (L3 OR L4)
L6            11 DUPLICATE REMOVE L5 (15 DUPLICATES REMOVED)

=> s thiazolidinedione
L7          7071 THIAZOLIDINEDIONE

=> s l6 (p) l7
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'L48 (P) L39'
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'L50 (P) L40'
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'L54 (P) L42'
L8             1 L6 (P) L7

=> d l8 1 ibib abs

L8   ANSWER 1 OF 1     MEDLINE
ACCESSION NUMBER:    97238686     MEDLINE
DOCUMENT NUMBER:     97238686   PubMed ID: 9121558
TITLE:               Sensitization of diabetic and obese mice to insulin by
                     retinoid X receptor agonists.
AUTHOR:              Mukherjee R; Davies P J; Crombie D L; Bischoff E D; Cesario
                     R M; Jow L; Hamann L G; Boehm M F; Mondon C E; Nadzan A M;
                     Paterniti J R Jr; Heyman R A
CORPORATE SOURCE:    Department of Cardiovascular Research, Ligand
                     Pharmaceuticals, San Diego, California 92121, USA.
SOURCE:              NATURE, (1997 Mar 27) 386 (6623) 407-10.
                     Journal code: 0410462. ISSN: 0028-0836.
PUB. COUNTRY:        ENGLAND: United Kingdom
DOCUMENT TYPE:       Journal; Article; (JOURNAL ARTICLE)
LANGUAGE:            English
FILE SEGMENT:        Priority Journals
ENTRY MONTH:         199704
ENTRY DATE:          Entered STN: 19970506
                     Last Updated on STN: 19970506
                     Entered Medline: 19970418
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AB Retinoic acid receptors (RAR), thyroid hormone receptors (TR), peroxisome proliferator activated receptors (PPARs) and the orphan receptor, ***LXR*** , bind preferentially to DNA as heterodimers with a common partner, retinoid X receptor (RXR), to regulate transcription. We investigated whether RXR-selective ***agonists*** replicate the

activity of ligands for several of these receptors? We demonstrate here that RXR-selective ligands (referred to as rexinoids) function as RXR heterodimer-selective ***agonists*** , activating RXR: PPARgamma and RXR: ***LXR*** dimers but not RXR:RAR or RXR:TR heterodimers. Because PPARgamma is a target for antidiabetic agents, we investigated whether RXR ligands could alter insulin and glucose signalling. In mouse models of noninsulin-dependent ***diabetes*** mellitus (NIDDM) and obesity, RXR ***agonists*** function as insulin sensitizers and can decrease hyperglycaemia, hypertriglyceridaemia and hyperinsulinaemia. This antidiabetic activity can be further enhanced by combination treatment with PPARgamma ***agonists*** , such as ***thiazolidinediones*** . These data suggest that the RXR:PPARgamma heterodimer is a single-function complex serving as a molecular target for treatment of insulin resistance. Activation of the RXR:PPARgamma dimer with rexinoids may provide a new and effective treatment for NIDDM.

=> d his

(FILE 'HOME' ENTERED AT 10:03:02 ON 16 JAN 2003)

FILE 'MEDLINE, CAPLUS, BIOSIS, EMBASE, SCISEARCH, AGRICOLA' ENTERED AT 10:03:25 ON 16 JAN 2003

```
L1        134117 S METABOLIC DISEASE
L2        670541 S DIABETES
L3           991 S LXR OR (LXR (W) ALPHA) OR (LXR (W) BETA)
L4           204 S L3 (P) (AGONIST OR ANTAGONIST)
L5            26 S (L1 OR L2) (P) (L3 OR L4)
L6            11 DUPLICATE REMOVE L5 (15 DUPLICATES REMOVED)
L7          7071 S THIAZOLIDINEDIONE
L8             1 S L6 (P) L7
```

=> log y

| COST IN U.S. DOLLARS | SINCE FILE ENTRY | TOTAL SESSION |
|---|---|---|
| FULL ESTIMATED COST | 44.68 | 44.89 |

| DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) | SINCE FILE ENTRY | TOTAL SESSION |
|---|---|---|
| CA SUBSCRIBER PRICE | -2.60 | -2.60 |

STN INTERNATIONAL LOGOFF AT 10:07:48 ON 16 JAN 2003

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FILE 'HOME' ENTERED AT 09:52:17 ON 16 JAN 2003

=> file medline caplus biosis embase scisearch agricola
COST IN U.S. DOLLARS                            SINCE FILE      TOTAL
                                                   ENTRY    SESSION
FULL ESTIMATED COST                                 0.21       0.21

FILE 'MEDLINE' ENTERED AT 09:52:43 ON 16 JAN 2003

FILE 'CAPLUS' ENTERED AT 09:52:43 ON 16 JAN 2003
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FILE 'SCISEARCH' ENTERED AT 09:52:43 ON 16 JAN 2003
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FILE 'AGRICOLA' ENTERED AT 09:52:43 ON 16 JAN 2003

=> s metabolic disease
L1      134117 METABOLIC DISEASE

=> s diabetes
L2      670541 DIABETES

=> s lxr
L3         991 LXR

=> s lxr (w) beta
L4         142 LXR (W) BETA

=> s lxr (w) alpha
L5         477 LXR (W) ALPHA

=> s (l3 or l4 or l5) (p) agonist
L6         186 (L3 OR L4 OR L5) (P) AGONIST

=> s (l3 or l4 or l5) (p) antagonist
   5 FILES SEARCHED...
L7          25 (L3 OR L4 OR L5) (P) ANTAGONIST

=> s (l6 or l7) (p) (l1 or l2)
L8          17 (L6 OR L7) (P) (L1 OR L2)

=> duplicate remove l8
DUPLICATE PREFERENCE IS 'MEDLINE, CAPLUS, BIOSIS, EMBASE, SCISEARCH'
KEEP DUPLICATES FROM MORE THAN ONE FILE?  Y/(N):n
PROCESSING COMPLETED FOR L8
L9             4 DUPLICATE REMOVE L8 (13 DUPLICATES REMOVED)

=> d l9 1-4 ibib abs

L9   ANSWER 1 OF 4     MEDLINE                          DUPLICATE 1
ACCESSION NUMBER:   2003007893     IN-PROCESS
DOCUMENT NUMBER:    22401814   PubMed ID: 12414791
TITLE:              Antidiabetic action of a liver x receptor agonist mediated
                    by inhibition of hepatic gluconeogenesis.
AUTHOR:             Cao Guoqing; Liang Yu; Broderick Carol L; Oldham Brian A;
                    Beyer Thomas P; Schmidt Robert J; Zhang Youyan; Stayrook
                    Keith R; Suen Chen; Otto Keith A; Miller Anne R; Dai
                    Jiannong; Foxworthy Patricia; Gao Hong; Ryan Timothy P;
                    Jiang Xian-Cheng; Burris Thomas P; Eacho Patrick I; Etgen
                    Garret J
```

CORPORATE SOURCE: Lilly Research Laboratories, Eli Lilly & Company, Indianapolis, Indiana 46285 and the Department of Anatomy and Cell Biology, State University of New York Downstate Medical Center, Brooklyn, New York 11203.
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (2003 Jan 10) 278 (2) 1131-6.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: IN-PROCESS; NONINDEXED; Priority Journals
ENTRY DATE: Entered STN: 20030107
Last Updated on STN: 20030107

AB The oxysterol receptors ***LXR*** (liver X receptor)-alpha and LXRbeta are nuclear receptors that play a key role in regulation of cholesterol and fatty acid metabolism. We found that ***LXRs*** also play a significant role in glucose metabolism. Treatment of diabetic rodents with the ***LXR*** ***agonist*** , T0901317, resulted in dramatic reduction of plasma glucose. In insulin-resistant Zucker (fa/fa) rats, T0901317 significantly improved insulin sensitivity. Activation of ***LXR*** did not induce robust adipogenesis but rather inhibited the expression of several genes involved in hepatic gluconeogenesis, including phosphoenolpyruvate carboxykinase (PEPCK). Hepatic glucose output was dramatically reduced as a result of this regulation. Nuclear run-on studies indicated that transcriptional repression was primarily responsible for the inhibition of PEPCK by the ***LXR*** ***agonist*** . In addition, we show that the regulation of the liver gluconeogenic pathway by ***LXR*** ***agonists*** was a direct effect on hepatocytes. These data not only suggest that ***LXRs*** are novel targets for ***diabetes*** but also reveal an unanticipated role for these receptors, further linking lipid and glucose metabolism.

L9 ANSWER 2 OF 4 MEDLINE DUPLICATE 2
ACCESSION NUMBER: 2002396032 MEDLINE
DOCUMENT NUMBER: 22139932 PubMed ID: 12145154
TITLE: Liver X receptors downregulate 11beta-hydroxysteroid dehydrogenase type 1 expression and activity.
AUTHOR: Stulnig Thomas M; Oppermann Udo; Steffensen Knut R; Schuster Gertrud U; Gustafsson Jan-Ake
CORPORATE SOURCE: Department of Medical Nutrition and Biosciences, Karolinska Institutet, Huddinge, Sweden.. thomas.stulnig@akh-wien.ac.at
SOURCE: DIABETES, (2002 Aug) 51 (8) 2426-33.
Journal code: 0372763. ISSN: 0012-1797.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 200208
ENTRY DATE: Entered STN: 20020730
Last Updated on STN: 20030108
Entered Medline: 20020821

AB 11Beta-hydroxysteroid dehydrogenase type 1 (11beta-HSD-1) converts inactive corticosteroids into biologically active corticosteroids, thereby regulating the local concentration of active glucocorticoids, such as cortisol. 11beta-HSD-1 is particularly expressed in adipocytes and liver and appears to be causally linked to the development of type 2 ***diabetes*** and the metabolic syndrome. Liver X receptor ( ***LXR*** )- ***alpha*** and -beta are nuclear oxysterol receptors whose key role in lipid metabolic regulation has recently been established. In this study, we show that treatment of adipocytes derived from 3T3-L1 cells and mouse embryonic fibroblasts in vitro with synthetic or natural ***LXR*** ***agonists*** decreases mRNA expression of 11beta-HSD-1 by approximately 50%, paralleled by a significant decline in 11beta-HSD-1 enzyme activity. Downregulation of 11beta-HSD-1 mRNA by ***LXRs*** started after a lag period of 8 h and required ongoing protein synthesis. Moreover, long-term per os treatment with a synthetic ***LXR*** ***agonist*** downregulated 11beta-HSD-1 mRNA levels by approximately 50% in brown adipose tissue and liver of wild-type but not of LXRalpha(-/-)beta(-/-) mice and was paralleled by downregulation of hepatic PEPCK expression. In conclusion, ***LXR*** ligands could mediate beneficial metabolic effects in insulin resistance syndromes

including type 2 ***diabetes*** by interfering with peripheral glucocorticoid activation.

L9 ANSWER 3 OF 4 MEDLINE DUPLICATE 3
ACCESSION NUMBER: 2002675571 MEDLINE
DOCUMENT NUMBER: 22323543 PubMed ID: 12435796
TITLE: Novel roles of liver X receptors exposed by gene expression profiling in liver and adipose tissue.
AUTHOR: Stulnig Thomas M; Steffensen Knut R; Gao Hui; Reimers Mark; Dahlman-Wright Karin; Schuster Gertrud U; Gustafsson Jan-Ake
CORPORATE SOURCE: Department of Medical Nutrition and Biosciences, Karolinska Institutet, Huddinge, Sweden.. thomas.stulnig@akh-wien.ac.at
SOURCE: MOLECULAR PHARMACOLOGY, (2002 Dec) 62 (6) 1299-305. Journal code: 0035623. ISSN: 0026-895X.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200212
ENTRY DATE: Entered STN: 20021119
Last Updated on STN: 20021227
Entered Medline: 20021209
AB Liver X receptor ( ***LXR*** ) ***alpha*** and LXRbeta are nuclear oxysterol receptors whose biological function has so far been elucidated only with respect to cholesterol and lipid metabolism. To expose novel biological roles for ***LXRs*** , we performed genome-wide gene expression profiling studies in liver and white and brown adipose tissue from wild-type (LXRalpha(+/+)beta(+/+)) and knockout mice (LXRalpha(-/-)beta(-/-)) treated with a synthetic ***LXR*** ***agonist*** . By an adapted statistical analysis, we detected 319 genes significantly regulated by ***LXR*** ***agonist*** treatment in wild-type but not in knockout mice, fulfilling most stringent criteria with an overall confidence of 94%. Down-regulation of essential enzymes of gluconeogenesis in liver could point to possible beneficial effects of ***LXR*** ***agonists*** in ***diabetes*** mellitus. ***LXR*** ***agonist*** treatment also altered expression of genes involved in steroid hormone synthesis and growth hormone receptor signaling, emphasizing a potential impact on endocrine function. Notably, ***LXR*** ***agonist*** treatment up-regulated CYP4A10 and CYP4A14 together with cytochrome P450 reductase, indicating a possible enhancement of microsomal lipid peroxidation. In conclusion, these gene expression profiling data identify novel areas of regulation by ***LXRs*** and provide a highly valuable basis for further research on the biological functions of these nuclear receptors and the pharmacological characteristics of their ligands.

L9 ANSWER 4 OF 4 MEDLINE DUPLICATE 4
ACCESSION NUMBER: 97238686 MEDLINE
DOCUMENT NUMBER: 97238686 PubMed ID: 9121558
TITLE: Sensitization of diabetic and obese mice to insulin by retinoid X receptor agonists.
AUTHOR: Mukherjee R; Davies P J; Crombie D L; Bischoff E D; Cesario R M; Jow L; Hamann L G; Boehm M F; Mondon C E; Nadzan A M; Paterniti J R Jr; Heyman R A
CORPORATE SOURCE: Department of Cardiovascular Research, Ligand Pharmaceuticals, San Diego, California 92121, USA.
SOURCE: NATURE, (1997 Mar 27) 386 (6623) 407-10. Journal code: 0410462. ISSN: 0028-0836.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199704
ENTRY DATE: Entered STN: 19970506
Last Updated on STN: 19970506
Entered Medline: 19970418
AB Retinoic acid receptors (RAR), thyroid hormone receptors (TR), peroxisome proliferator activated receptors (PPARs) and the orphan receptor, ***LXR*** , bind preferentially to DNA as heterodimers with a common partner, retinoid X receptor (RXR), to regulate transcription. We

investigated whether RXR-selective ***agonists*** replicate the activity of ligands for several these receptors? We demonstrate here that RXR-selective ligands (referred to as rexinoids) function as RXR heterodimer-selective ***agonists*** , activating RXR: PPARgamma and RXR: ***LXR*** dimers but not RXR:RAR or RXR:TR heterodimers. Because PPARgamma is a target for antidiabetic agents, we investigated whether RXR ligands could alter insulin and glucose signalling. In mouse models of noninsulin-dependent ***diabetes*** mellitus (NIDDM) and obesity, RXR ***agonists*** function as insulin sensitizers and can decrease hyperglycaemia, hypertriglyceridaemia and hyperinsulinaemia. This antidiabetic activity can be further enhanced by combination treatment with PPARgamma ***agonists*** , such as thiazolidinediones. These data suggest that the RXR:PPARgamma heterodimer is a single-function complex serving as a molecular target for treatment of insulin resistance. Activation of the RXR:PPARgamma dimer with rexinoids may provide a new and effective treatment for NIDDM.

=> d his

(FILE 'HOME' ENTERED AT 09:52:17 ON 16 JAN 2003)

FILE 'MEDLINE, CAPLUS, BIOSIS, EMBASE, SCISEARCH, AGRICOLA' ENTERED AT 09:52:43 ON 16 JAN 2003

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L1        134117 S METABOLIC DISEASE
L2        670541 S DIABETES
L3           991 S LXR
L4           142 S LXR (W) BETA
L5           477 S LXR (W) ALPHA
L6           186 S (L3 OR L4 OR L5) (P) AGONIST
L7            25 S (L3 OR L4 OR L5) (P) ANTAGONIST
L8            17 S (L6 OR L7) (P) (L1 OR L2)
L9             4 DUPLICATE REMOVE L8 (13 DUPLICATES REMOVED)
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=> log y

| COST IN U.S. DOLLARS | SINCE FILE ENTRY | TOTAL SESSION |
|---|---|---|
| FULL ESTIMATED COST | 23.37 | 23.58 |

STN INTERNATIONAL LOGOFF AT 09:56:27 ON 16 JAN 2003